

# Controlling forest fires

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Simon Fraser University statistician Rick Routledge will share his knowledge of what layers of charcoal in lake-bottom sediment can tell us about an area's forest fire history, at the world's largest science fair in Vancouver.

Routledge is speaking at Forest Fires in Canada: [Impacts of Climate Change](#) and Fire Smoke, a three-hour seminar at the 2012 [American Association for the Advancement of Science](#) (AAAS) conference. The international event runs Feb. 16 to 20 at the Vancouver Convention Centre.

Routledge's speech, Fire History in Ponderosa Pine Grasslands: Lessons from the Past,. kicks off the seminar, which reviews potential ways of resolving increasing forest [fire occurrence](#) across Canada.

Routledge will discuss whether First Nations' historical success with using frequent intentionally set small fires to suppress [forest fire](#) occurrence generally could inform present day forest fire management.

Routledge is better known for estimating past abundance of returning sockeye salmon in a rearing lake based on the abundance, size and shape of the remains of organisms, fed on by fish, in sediment.

However, here, he will apply his that experience to inferring past forest fire frequency from layers of charcoal-laden sediment in lake bottoms.

"A major fire will generate an influx of small charcoal particles,"

explains Routledge. "If you take a core of sediment from the [lake bottom](#), by sifting down through the layers, a researcher can use the charcoal abundance in successive layers to gain insight on fire history in the vicinity of the lake."

Routledge will draw on his study of [lake sediments](#) and fire-scarred trees in the Okanagan's Sawmill and Madden lakes to compare the success of present and past forest fire management regimes. He says studies show that present day aggressive fire protection methods can lead to a build-up of conditions on the forest floor. That, he adds, can spark potentially devastating fires, such as the one in the Okanagan Valley in 2003.

"Some examples of aggressive fire protection methods are helicopter bombing with water and fire retardant and deploying ground crews and equipment with all-terrain vehicles into the forest," says Routledge.

"It's probably naïve to suggest that we try to reduce the fire risk simply by returning to the past where fires may well have been deliberately started by First Nations people to manage the natural landscape.

"We shall probably need to continue to develop a mixed strategy that will involve some controlled burning, some silviculture and some aggressive [fire](#) suppression, particularly where urban and rural area connect."

Provided by Simon Fraser University

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